AMENDMENTS

In the Title

Please amend the title of the invention to read as follows:

NETWORK PROCESSOR SYSTEM INCLUDING A CENTRAL PROCESSOR
AND AT LEAST ONE PERIPHERAL PROCESSOR

In the Abstract

Please amend the abstract of the disclosure to read as follows:

A general purpose, software-controlled central processor (CP) can be augmented by a set of task specific, specialized peripheral processors (PPs). The central processor accomplishes its functions with the support of the PPs. Peripheral processors may include but are not limited to a packet parser, a packet deconstructor, a search engine, and a packet editor. At each step in the use of this network processor system, the central processor has an opportunity to intervene and modify the handling of the packet based on its interpretation of PP results. The programmable nature of the CP and the PPs provides the system with flexibility and adaptability.

In the Claims

The following is a clean version of the entire set of pending claims. In accordance with 37 CFR § 1.121(c)(1)(ii), the attachment entitled "Version with Markings to Show Changes" provides marked up versions of the claims containing the newly introduced changes.

1.   A method of packet processing comprising:

parsing a packet, said packet having a header portion, to determine a vector;

coordinating processing using said vector;

deconstructing said packet header to form header data;

searching one or more data structures based on said header data to produce search
    results;

editing said packet based on said search results, said header data, and said vector;

wherein said coordinating further comprises monitoring said deconstructing, said
    searching, and said editing.

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2.   The method of Claim 1, wherein said coordinating further comprises sharing data with said parsing, said deconstructing, said searching, and said editing.

3.   The method of Claim 1, further comprising buffering said packet before said parsing.

4.   The method of Claim 1, wherein:
said deconstructing further comprises forming a search argument; and
said searching uses said search argument.

5.   The method of Claim 1, wherein:
said deconstructing further comprises forming a search argument;
said coordinating further comprises operating on said search argument to form a
        modified search argument prior to said searching; and
said searching uses said modified search argument.

6.   **(Amended Once)** An apparatus for packet processing, comprising:
a central processor for packet processing, said central processor comprising a register
        set; and
one or more peripheral processors each connected to said central processor and each
        comprising a register set, wherein each said peripheral processor returns at
        least one datum to said central processor;
wherein said central processor communicates with each said peripheral processor and
        said one or more peripheral processors comprises a packet parser to determine
        a vector.

7.   The apparatus of Claim 6, wherein said central processor comprises a general purpose processor.

8.   The apparatus of Claim 6, wherein said central processor comprises a microsequencer.

9.   The apparatus of Claim 6, wherein said central processor comprises more than one processor acting in concert.

10.   The apparatus of Claim 6, wherein one or more of said peripheral processors comprise fixed logic circuits.

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11.   The apparatus of Claim 6, wherein one or more of said peripheral processors comprise programmable logic circuits.

12.   The apparatus of Claim 6, wherein one or more of said peripheral processors comprise a programmable state machine.

13.   The apparatus of Claim 6, wherein a portion of each said peripheral register set is mapped onto said central processor register set.

14.   The apparatus of Claim 6, wherein said central processor and at least one peripheral processor together form at least a part of a single application specific integrated circuit.

15.   A computer system for packet processing, comprising computer instructions for:
        parsing a packet, said packet having a header portion, to determine a vector;
        coordinating processing using said vector;
        deconstructing said packet header to form header data;
        searching one or more data structures based on said header data to produce search
            results;
        editing said packet based on said search results, said header data, and said vector;
        wherein said coordinating further comprises monitoring said deconstructing, said
            searching, and said editing.

16.   The computer system of Claim 15, wherein said coordinating further comprises sharing data with said parsing, said deconstructing, said searching, and said editing.

17.   The computer system of Claim 15, further comprising buffering said packet before said parsing.

18.   The computer system of Claim 15, wherein:
        said deconstructing further comprises forming a search argument; and
        said searching uses said search argument.

19.   The computer system of Claim 15, wherein:
        said deconstructing further comprises forming a search argument;
        said coordinating further comprises operating on said search argument to form a
            modified search argument prior to said searching; and

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said searching uses said modified search argument.

20.   A computer-readable storage medium, comprising computer instructions for:

parsing a packet, said packet having a header portion, to determine a vector;

coordinating processing using said vector;

deconstructing said packet header to form header data;

searching one or more data structures based on said header data to produce search
         results;

editing said packet based on said search results, said header data, and said vector;

wherein said coordinating further comprises monitoring said deconstructing, said
         searching, and said editing.

21.   The computer-readable storage medium of Claim 20, wherein said coordinating
further comprises sharing data with said parsing, said deconstructing, said searching, and said
editing.

22.   The computer-readable storage medium of Claim 20, further comprising buffering said
packet before said parsing.

23.   The computer-readable storage medium of Claim 20, wherein:

said deconstructing further comprises forming a search argument; and

said searching uses said search argument.

24.   The computer-readable storage medium of Claim 20, wherein:

said deconstructing further comprises forming a search argument;

said coordinating further comprises operating on said search argument to form a
         modified search argument prior to said searching; and

said searching uses said modified search argument.

25.   A computer data signal embodied in a carrier wave, comprising computer instructions
for:

parsing a packet, said packet having a header portion, to determine a vector;

coordinating processing using said vector;

deconstructing said packet header to form header data;

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searching one or more data structures based on said header data to produce search results;

editing said packet based on said search results, said header data, and said vector;

wherein said coordinating further comprises monitoring said deconstructing, said searching, and said editing.

26. The computer data signal of Claim 25, wherein said coordinating further comprises sharing data with said parsing, said deconstructing, said searching, and said editing.

27. The computer data signal of Claim 25, further comprising buffering said packet before said parsing.

28. The computer data signal of Claim 25, wherein:

said deconstructing further comprises forming a search argument; and

said searching uses said search argument.

29. The computer data signal of Claim 25, wherein:

said deconstructing further comprises forming a search argument;

said coordinating further comprises operating on said search argument to form a modified search argument prior to said searching; and

said searching uses said modified search argument.